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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,809	12/27/2001	Marcel F.C. Schemmann	US010689	5377
24737	7590	07/26/2005	EXAMINER	
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			ART UNIT	PAPER NUMBER
			2638	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/029,809	Applicant(s) SCHEMMANN ET AL.	
	Examiner Hanh Phan	Art Unit 2638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2001.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-21 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 04/03/2005.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 6-9, 12, 13 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bodeep et al (US Patent No. 5,798,858) in view of Vohra et al (Pub. No.: US 2003/0152386 A1).

Regarding claim 1, 8, 9 and 12, referring to Figures 1, 2A and 2B, Bodeep teaches an optical transmission system comprising:

a plurality of optical signal transmitters (i.e., transmitter 1, transmitter 2, ..., transmitter N, Fig. 1) for receiving signal inputs and transmitting optical signals representative of received signals, wherein each optical signal transmitter produces optical signals having a first characteristic wavelength;

a plurality of optical transmission lines (i.e., optical fibers F1, F2, ..., Fn, Fig. 1) coupled to the optical signal transmitters (i.e., transmitter 1, transmitter 2, ..., transmitter N, Fig. 1), the optical transmission lines (optical fibers F1, F2, ..., Fn) being combined to form a signal optical transmission line at a first end of the optical transmission line (i.e.,

optical transmission lines F_1, F_2, \dots, F_n being combined by an passive optical splitter/combiner 2 to form a single optical transmission line 3, see Fig. 1);

at least head end (i.e., a receiver 4, Fig. 1) coupled to a second end of the optical transmission line opposite the first end;

wherein no signal multiplexer is used to combine the optical transmission lines combined into the single optical transmission line (see col. 2, lines 40-48 and lines 66-67, col. 3, lines 1-57 and col. 4, lines 5-12).

Bodeep differs from claims 1, 8, 9 and 12 in that he fails to teach up-converting received signals to a unique frequency band, one DWDM signal receiver and at least one information signal line coupled to the output of the DWDM signal receiver. However, Vohra teaches up-converting received signals to a unique frequency band (i.e. RF upconversion mechanisms 1-3, Figs. 1 and 9), one DWDM signal receiver (i.e., multi format optical signal receiver 1010, Fig. 10) and at least one information signal line coupled to the output of the DWDM signal receiver (i.e., multi format optical signal receiving device 1 and information destinations 1050, see Figs. 10 and 11, and see page 3, paragraph [0036] and page 5, paragraphs [0055]-[0064]). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the up-converting received signals to a unique frequency band, one DWDM signal receiver and at least one information signal line coupled to the output of the DWDM signal receiver as taught by Vohra in the system of Bodeep. One of ordinary skill in the art would have been motivated to do this since Vohra suggests in page 3,

paragraph [0036] and page 5, paragraphs [0055]-[0064] that using such the up-converting received signals to a unique frequency band, one DWDM signal receiver and at least one information signal line coupled to the output of the DWDM signal receiver have advantage of allowing generating a multi format optical signal based on information in different formats from heterogeneous information sources and providing a multi format optical signal transport receiver decodes the multi format optical signal to recover the information of different formats.

Regarding claims 2 and 13, Bodeep further teaches the plurality of optical signal transmitters produce a plurality of optical signals, and wherein the plurality of optical signals are freely combined (Fig. 1).

Regarding claims 6 and 17, Bodeep further teaches the plurality of optical signals are combined with a splitter/combiner apparatus (Fig. 1).

Regarding claims 7 and 18-21, the combination of Bodeep and Vohra teaches the output from a first of the at least one DWDM receivers and the output from a second of the at least one DWDM receivers are signals having different wavelengths, and wherein the different wavelengths do not converge (see Figs. 10 and 11 of Vohra).

4. Claims 3-5, 11 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bodeep et al (US Patent No. 5,798,858) in view of Vohra et al (Pub. No.: US 2003/0152386 A1) and further in view of Way (Pub. No.: US 2002/0021464 A1).

Regarding claims 3, 5, 11 and 14-16, Bodeep as modified by Vohra teaches all the aspects of the claimed invention except fails to specifically teach wherein each the unique frequency band is separated by about the speed of light divided by 50. However, Way teaches the center frequencies of the lambdas range from 1530nm to 1562 nm with discrete center frequencies at a spacing selected 50Ghz (see page 2, paragraph [0031]). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the center frequencies of the lambdas range from 1530nm to 1562 nm with discrete center frequencies at a spacing selected 50Ghz as taught by Way in the system of Bodeep modified by Vohra. One of ordinary skill in the art would have been motivated to do this since Way suggests in page 2, paragraph [0031] that using such the center frequencies of the lambdas range from 1530nm to 1562 nm with discrete center frequencies at a spacing selected 50Ghz have advantage of allowing avoiding or minimizing cross talk.

Regarding claim 4, the combination of Bodeep, Vohra and Way teaches wherein each upconverter is characterized by the frequency band being unique to that the upconverter and different from each said frequency band created by each other the upconverter (see page 3 of Vohra, paragraph [0036] and page 5, paragraphs [0055]-[0064]).

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bodeep et al (US Patent No. 5,798,858) in view of Vohra et al (Pub. No.: US 2003/0152386 A1) and further in view of Quale (US Patent No. 6,317,234).

Regarding claim 10, Bodeep as modified by Vohra teaches all the aspects of the claimed invention except fails to specifically teach combining the plurality of said optical transmission lines together in a plurality of locations between the transmission source and the headend without use of any signal multiplexing package. However, Quale in US Patent No. 6,317,234 teaches combining the plurality of said optical transmission lines together in a plurality of locations between the transmission source and the headend without use of any signal multiplexing package (see Fig. 1, col. 5, lines 60-67 and col. 6, lines 1-19). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the combining the plurality of said optical transmission lines together in a plurality of locations between the transmission source and the headend without use of any signal multiplexing package as taught by Quale in the system of Bodeep modified by Vohra. One of ordinary skill in the art would have been motivated to do this since Quale suggests in column 5, lines 6—67 and col. 6, lines 1-19 that using such the combining the plurality of said optical transmission lines together in a plurality of locations between the transmission source and the headend without use of any signal multiplexing package have advantage of allowing combining the individual signals into the combined signal and avoiding or minimizing cross talk.

Response to Arguments

6. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye, can be reached on (571)272-3078. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

A handwritten signature in black ink, appearing to read 'Hanh Phan', with a stylized, cursive script.

**HANH PHAN
PRIMARY EXAMINER**